INTRODUCTION

The Combined Communications-Electronics Board (CCEB) is a five-nation joint military communications-electronics (C-E) organization whose mission is the co-ordination of any military C-E matter that is referred to it by a member nation. The member nations of the CCEB are Australia, Canada, New Zealand, the United Kingdom and the United States of America.

BACKGROUND AND HISTORY

The first high-level proposals for a structure to formulate combined communications-electronics policy were exchanged between the UK and the US in March 1941. These proposals led to the development of the Combined Communications Board (CCB) that held its first meeting under Lord Mountbatten in Washington, D.C. on 24 July 1942. CCB membership consisted of two representatives from the United States Army, two representatives from the United States Navy, three UK representatives and one representative each from Australia, New Zealand and Canada. The CCB grew to 33 sub-committees established to consider all communication specialist areas.

The CCB produced all combined communications-electronics publications used by the member nations. It also produced at that time more than two million additional copies, in 12 languages, for use by CCB allies. The work of the CCB continued after the war until 14 October 1949 when it was reduced in size and commitment with the formation of NATO and dissolution of the Combined Chiefs of Staff Organization. The United Kingdom Joint Communications Staff, Washington, and the United States Joint Communications-Electronics Committee continued to meet on regular basis as the US-UK Joint Communications-Electronics Committee with representatives of Australia, Canada and New Zealand attending as appropriate.

 Canada became a full member of the organization in 1951, Australia in 1969 and New Zealand in 1972 when the organization was renamed the Combined Communications-Electronics Board. In 1986 the CCEB broadened its Terms of Reference (TOR) to include communication and information systems in support of command and control. CCEB interoperability activities have always been coordinated with those of the North Atlantic Treaty Organization (NATO) and the

US Military Communications Electronics Board (MCEB). Recently, increased attention is being given to coalition C4 interoperability and to the provision of tangible deliverables intended to maximize coalition Warfighter effectiveness. This has led to a close relationship with the seven-nation Multinational Interoperability Council (MIC)1. Under a Statement of Cooperation it is agreed that the MIC will support the CCEB as the lead coordinator for multinational Command, Control, Communications and Computer (C4) interoperability, and the CCEB supports the MIC in its role of leading the development of Joint/Combined doctrine and defining the Warfighters C4 requirements.

In 2001, the Vice/Deputy Chiefs of the CCEB nations agreed that the CCEB should take a leading role in facilitating coordination on C4 matters between the nations and their various single Service groups, clearly showing the high-level support that continues to be given to the CCEB in C4 interoperability coordination Membership.

CCEB PURPOSE

In 2005, the CCEB Principals adopted the following purpose statement:

Enable Interoperable C4 Capabilities That Make Warfighters More Effective in Coalition Operations.

As the only joint or combined organization whose focus is entirely on C4 interoperability matters, the CCEB is uniquely positioned to provide C4 leadership within the joint and combined environment.   In exercising its leadership, the CCEB will co-ordinate and harmonize its efforts with those of the single Service fora, MIC, TTCP and NATO with regards to C4. As appropriate, the CCEB will either take the lead in issues of interest or provide expert technical support to single Service organizations. Where appropriate and when agreed, an individual CCEB country may be designated as lead nation on a particular issue. This may occur when a nation has the greatest or most pressing need to set a standard that is needed for a national project.

The CCEB nations recognize that interoperability within the NATO alliance is an essential operational issue for the three member nations, who are also NATO members. Therefore, harmonization of standards, practices and procedures, where appropriate with NATO, is to be achieved to the greatest possible extent. Historically, CCEB nations have had a major positive impact on NATO's wider coalition C4 (technical) interoperability through the generation and distribution of communications procedural documents titled Allied Communications Publications (ACPs). The NATO alliance and many like minded nations have come to depend upon ACPs for their communications operations and the CCEB has thus become a respected "communications standards" organization. Continued maintenance

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[1] MIC Membership – Australia, Canada, United Kingdom, United States of America, Germany, France, Italy

and generation of new ACPs in response to adoption of newer technologies by nations' militaries is a fundamental objective of CCEB and vital to its relevancy in coalition operations.

As the CCEB does not own infrastructure, interoperability among the member nations is achieved by setting architecture, standards and operational procedures such that the totality of the various capabilities fielded over time will act increasingly as a virtual single system. It provides a forum whereby national programs are able to achieve alignment and interoperability of their capabilities, while recognizing that interoperability will only occur if nations use common agreed standards in their procurement programs. The CCEB Strategic Plan provides the road map to achieve future interoperability. The Management Plan is the coordination document by which the CCEB undertakes tasks in order to achieve its strategic aims.

Although it will sometimes be necessary for the CCEB to develop some military standards, the CCEB will normally adopt commercial standards and products that meet military requirements. The onus on the CCEB will be first to define the various common capabilities for which agreement is needed and then to follow a process of selection, ratification and publication of associated standards and procedures. Where appropriate, CCEB nations may agree to accept a national solution for a particular requirement. This may occur when there is no ready solution to an allied problem, and acceptance of a national solution by other nations will promote interoperability.

Standards to promote coalition interoperability are articulated in the NATO NC3A Technical Architecture (TA) documentation, the ADatP-34. The CCEB has adopted the NATO document as its interoperability standards list. All CCEB nations have the opportunity to influence standards relevant to the CCEB nations during its annual development through their national NATO Open Standards WG (NOSWG) representative. At the first EG meeting following the NATO release of a new version of the ADatP-34, the EG collectively approves it as the CCEB combined interoperability standards list on behalf of the Principals. A Combined Agreement (COMAG) is then issued to promulgate formal approval of the latest version of ADatP-34 for CCEB use. When a CCEB nation seeks to amend ADatP-34 interoperability standards, its NOSWG national representative is responsible for proposing the change within the NOSWG.

Normally material will be published as guidance documents to accelerate the visibility of CCEB intentions within nations and relevant organizations. Where unanimous agreement and ratification is required, or the contents have the potential to impact significantly on nations, CCEB-developed material will normally be published as an ACP. CCEB work practice requires that every nation respond to all issues under consultation before a CCEB position can be formulated.

The CCEB shall take advantage of ongoing efforts and consider existing mature solutions, wherever they may be found. While there are immediate benefits from this approach, the full attainment of future high levels of interoperability will best be achieved through compliance with CCEB standards, practices, procedures and extension of interoperability agreements to potential coalition partners. The development of the CCEB Coalition Networking Strategy (CNS), and the implications it may have on the resource usage amongst the CCEB nations, is an example.

INTERACTION WITH OTHER INTERNATIONAL BODIES

The CCEB is the organization responsible for enhancing joint interoperability of allied C4 and coordinating C4 initiatives among the multinational interoperability organizations. As such, an important role for the CCEB is to interact closely on C4 matters with Multinational Interoperability and Standardization Fora (Multi-Fora); Australia, Canada, New Zealand, United Kingdom and United States (AUSCANNZUKUS) NAVAL C4, the Air and Space Interoperability Council (ASIC), the American-British-Canadian-Australian Armies (ABCA), the Technical Cooperation Program (TTCP)] and the Multinational Interoperability Council (MIC).

To this end, the CCEB strongly promotes and encourages both formal and informal co-operative efforts with other organizations. The objectives of such coordination are:

- To avoid unnecessary duplication of work on C4 matters.

- To avoid conflict between agreements undertaken individually by the CCEB and these organizations.

- To ensure that the CCEB and these organizations are aware of the combined and joint Service implications of work in progress in any of these organizations.

- To enable each organization to seek the direct advice of any other organization.